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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,564	02/10/2004	A. Lew Wingert	BOEI-1-1207	1436
46020	7590	10/26/2005	EXAMINER	
BLACK LOWE & GRAHAM PLLC 701 FIFTH AVENUE, SUITE 4800 SEATTLE, WA 98104			THOMAS, ALEXANDER S	
			ART UNIT	PAPER NUMBER
			1772	
DATE MAILED: 10/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/775,564

Applicant(s)

WINGERT ET AL.

Examiner

Alexander Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 56-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-55 and 69-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/10/04, 5/23/05</u> | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-55 and 69-72, drawn to a product, classified in class 428, subclass 113.
- II. Claims 56-68, drawn to a process, classified in class 156, subclass 60.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a different process such as by a process that does not include aligning the fibers.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Beaufait on September 29, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-55 and 69-72. Affirmation of this election must be made by applicant in replying to this Office action. Claims 56-68 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 6-8, 13, 14, 16-18, 20, 26, 69, 70 and 71 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Vogelesang et al 4,992,323. See claim 1, the Abstract and column 4, lines 59-62.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9-12, 15, 19 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westre et al 6,114,050 in view of Vogelesang et al ('323). The primary reference discloses the invention substantially as claimed; see for example the

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Abstract. However, it does not disclose fibers with the claimed modulus of elasticity.

The secondary reference discloses metal/fiber reinforced polymer laminates wherein the modulus of elasticity is within the instantly claimed range. It would have been obvious to one of ordinary skill in the art to use a fiber in the article of the primary reference with a modulus of elasticity greater than 270 Gpa in view of the teachings in the secondary reference in order to provide a laminate with optimum physical properties and fatigue performance.

10. Claims 21-25 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogelesang et al in view of Blohowiak et al 5,958,578. The primary reference discloses the invention substantially as claimed, namely a fiber-metal laminate comprising at least two metal layers and at least one fiber layer disposed between the metal layers wherein the fiber layer contains a resin matrix and has a modulus of elasticity within the instantly claimed range; see claim 1, the Abstract and column 4, lines 59-62. However it does not disclose the claimed sol-gel coating on the metal layers. The secondary reference discloses the use of a sol-gel coating on metal to improve bonding between the metal and a resin adhesive; see the Abstract. It would have been obvious to one of ordinary skill in the art to use a sol-gel coating on the article of the primary reference in view of the teachings in the secondary reference to improve interlaminar bonding in the article.

11. Claims 4, 5, 28-30, 36, 39, 40, 45-47, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogelesang et al in view of Vallittu et al 2004/0166304. The primary reference discloses the invention substantially as claimed,

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namely a fiber-metal laminate comprising at least two metal layers and at least one fiber layer disposed between the metal layers wherein the fiber layer contains a resin matrix and has a modulus of elasticity within the instantly claimed range; see claim 1, the Abstract and column 4, lines 59-62. However it does not teach the use of PIPD fibers in the laminate. The secondary reference discloses the equivalence of carbon, aramid, glass and PIPD fibers for use as reinforcement fibers in a resin matrix; see [0039]. It would have been obvious to one of ordinary skill in the art to use any well-known high modulus fiber, such as PIPD, as the fibers in the article of the primary reference in view of the teaching of equivalence of glass, carbon and PIPD fibers in the secondary reference.

12. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogelesang et al in view of Vallittu et al as applied to claims 4, 5, 28-30, 36, 39, 40, 45-47, 50 and 51 above, and further in view of Blohowiak et al. Blohowiak et al disclose the use of a sol-gel coating on metal to improve bonding between the metal and a resin adhesive; see the Abstract. It would have been obvious to one of ordinary skill in the art to use a sol-gel coating on the article of the primary reference in view of the teachings in the secondary reference to improve interlaminar bonding in the article.

13. Claims 31-35, 37, 38, 43, 44, 48, 49 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogelesang et al in view of Vallittu et al as applied to claims 4, 5, 28-30, 36, 39, 40, 45-47, 50 and 51 above, and further in view of Westre et al. Westre et al disclose a metal-fiber laminate wherein the fibers may be oriented in more than one direction, multiple fiber and metal layers may be used and a

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honeycomb core may be employed. It would have been obvious to one of ordinary skill in the art to use the structures taught in the secondary reference in the article of the primary reference depending on the desired structural properties for a particular end use.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502. The examiner can normally be reached on 6:30-4:00 M-THUR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ALEXANDER S. THOMAS  
PRIMARY EXAMINER